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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGO, HUYEN LE

ART UNIT PAPER NUMBER

2871

DATE MAILED: 05/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/893,974

Applicant(s)

JUN ET AL.

Examiner

Julie-Huyen L. Ngo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☒ Claim(s) 1-13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

Claims 1, 10, 11 are objected to because of the following informalities:

In claim 1 and 10-11, shall "a predetermined area" be "a display area"?

In line 3 of claim 11, "said first material" be "said first pattern material"?

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-8, 11-20 and 23-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuoka et al. (US5953094A).

Matsuoka et al. teach (Fig. 7) a liquid crystal display panel comprising:

- o a first glass substrate 11 having a groove 20 around a display area;
- o a second glass substrate 12 having a ridge 21 that extends into the groove;
- and
- o a liquid crystal layer 13 interposed between the first and second substrates, wherein the liquid crystal is over the display area.

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- a seal 19 between the first and second substrates (claim 2).

wherein

- the groove is formed in a patterned material (claims 5, 15, 25), which is formed of (acrylic resin) an organic compound or of a photoresist (claims 6, 16, 17, 26)
- the ridge is formed in a patterned material (claims 7, 18, 27), which is formed of (resin) an organic compound or of a photoresist (claims 8, 19, 20, 28).
- bonding the first substrate to the second substrate is performed by pressing the first substrate and the second substrate together (claim 23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-10 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka et al. (US5953094A) and further in view of Fujioka et al (US 6552764 B2) and Oh-kyong Kwon US6486930B1).

It is well known in the art for a liquid crystal display panel (fig. 1 of US6486930B1) to comprises a second substrate that includes a black matrix black

matrix layers 4 formed between the color filters for blocking light transmitted to regions other than the pixel region 2a (claims 9 and 21-22).

It is well known in the art that a liquid crystal display panel comprising a thin film transistor array in a display area as shown in (Fig. 2b of US6552764B2) as switching elements for controlling the electro-optical characteristics of the liquid crystal.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify that a liquid crystal display panel as Matsuoka et al. disclosed with (a) the second substrate including a black matrix formed between color filters for blocking light transmitted to regions other than the pixel region; (b) the display area includes a thin film transistor array as switching elements for controlling the electro-optical characteristics of the liquid crystal.

Conclusion

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Ohgawara et al. (US6407783B1) disclose (Fig. 3) a liquid crystal display device with sealing pattern of grooves.

TADOKORO (JP403287232A) discloses a LIQUID CRYSTAL DISPLAY PANEL with a sealing material layer by dividely disposing a sealing material enclosing the circumference to a frame shape to an upper transparent electrode substrate and a lower transparent electrode substrate, superposing both sealing materials on each other and joining two sheets of the transparent electrode substrates.

Buchwalter et al. (US6104466A) disclose LIQUID CRYSTAL DISPLAY PANEL, wherein the patterned structures of the plates have corresponding and opposing edges to provide an interference fit between the patterned structures of the first and second plates wherein self-alignment between the first and second plates is realized by engaging the corresponding and opposing edges in the interference fit.


Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Julie-Huyen L. Ngo whose telephone number is (703) 305-3508. The Examiner can normally be reached on T-Friday.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Robert H. Kim can be reached at (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-4709 for regular communications and (703) 746-4709 for After Final communications. Please contact the Examiner before faxing any paper to the Office.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

May 1, 2003



Julie-Huyen L. Ngo
Patent Examiner
Art Unit 2871